

**REMARKS**

Claims 16-36 are pending in the application

**Claim Rejections - 35 USC 102**

**35 USC 102(e) Rejections in view of Walker (US 6,979,827)**

Claims 16-17 and 20-36 were rejected under 35 USC 102(e) as being anticipated by Walker. The Examiner contends that Walker discloses all the elements of these claims. Applicant respectfully disagrees.

Applicant respectfully submits that claim 16 is novel over Walker because claim 16 includes the following features not disclosed in Walker:

- i) identifying a sub-area of the genuine object defined by a reference point;
- ii) recording information relating to the positions of identification elements in the sub-area of the genuine object relative to the reference point;
- iii) comparing measured information relating to the positions of identification elements in an object to be verified with the recorded information for the genuine object.

Applicant addresses each of these in turn.

- i) identifying a sub-area of the genuine object defined by a reference point

Walker does not identify a sub-area defined by a reference point. On this point, the Examiner has pointed to Fig 4 and stated that authentication elements 14 and authentication indicia 16 are in different areas of the media 12. However, neither of items 14 or 16 define a sub-area of the media 12. In contrast, both items 14, 16 are randomly positioned throughout the whole of the media 12 (see column 4, lines 11 to 14 and Fig 4). Hence, items 14, 16 are not only in one smaller, sub-area of the media 12, but they also cannot define such a sub-area. Furthermore, column 5, lines 5 to 11 confirms that the authentication indicia are printed adjacent to the authentication elements 14. Therefore, the authentication elements 14 are always in the

same locations as authentication indicia 16 (not different areas). For this reason alone the novelty rejection based on Walker is not appropriate.

ii) recording information relating to the positions of identification elements in the sub-area of the genuine object relative to the reference point

Walker does not record information relating to the positions of identification elements in a sub-area relative to a reference point. On this point, the Examiner highlighted column 6, lines 29-35 and column 7, lines 1-2. However, column 6, lines 29-35 does not disclose measuring the positions of the identification elements in a sub-area relative to a reference point. Actually, all that is being detected is the "presence or absence" of authentication indicia, i.e. are there any identification elements or not. The position of any such identification elements is not measured.

Throughout Walker, it is repeatedly stressed that what is being measured is the "presence or absence" of fibres, e.g. column 3, line 18; column 4, lines 45-46; column 5, lines 32-33; column 5, line 67; column 7, lines 15-16. There is certainly no disclosure of measuring and recording of the positions of the identification elements relative to a reference point.

Furthermore, although the passage highlighted by the Examiner states that the light source 64 illuminates "a portion or area of the media", there is no disclosure of any intentional illumination of any one particular sub-area defined by a reference point. There is no disclosure of this portion of the media being anything other than a completely random portion of the media which happens to be the closest part to the detector. The only disclosure of any measurement of the locations of the authentication elements is on column 6, lines 47 to 52, which discloses a comparison of the location of the authentication indicia 16 with the location of the authentication fibres 14. It should be noted that this is NOT disclosing any measurement relative to a reference point. Instead, all that is disclosed is measurement of the indicia 16 relative to the fibres 14.

Thus, for this additional reason, the rejection based on Walker is not proper.

iii) comparing measured information relating to the positions of identification elements in an object to be verified with the recorded information for the genuine object

In contrast, Walker does not compare measured information in an object to be verified with recorded information for a genuine object.

As explained above, Walker does not disclose the step of recording information relating to the positions of identification elements in a sub-area of the genuine object relative to a reference point. The only measurement of position (at all) is a comparison of the positions of the authentication indicia 16 and the authentication fibres 14 relative to each other (not relative to a reference point defining a sub-area).

On this point, the Examiner highlighted column 7, lines 1-7 and column 3, lines 11-15; however, the bar code discussed in column 7, lines 1 to 7 is merely a unique, random number printed on the media 12, as explained on column 4, lines 16 to 26. Nowhere does Walker disclose that the barcode is created by measuring the locations of the identification elements relative to a reference point and then converting such locations into a barcode. Walker merely discloses comparing a detected, random, barcode with other known barcodes. Thus, Walker does not disclose compare measured information relating to the positions of identification elements in an object to be verified with recorded information for a genuine object.

Accordingly, any one of the above points sufficiently overcomes the §102 rejection based on Walker. All three make is undisputable that the §102 rejection should be withdrawn.

Similar arguments apply to claim 31, which has features corresponding to the above three differentiating method features. Hence, claim 31 is also novel over Walker.

Based on the foregoing, reconsideration and withdrawal of the §102 rejections of claims 16-17, 20-31 is respectfully requested.

35 USC 103: Non-obviousness of claims 16 and 31

As explained above, three differentiating features of claim 16 over Walker are:

- i) identifying a sub-area of the genuine object defined by a reference point;
- ii) recording information relating to the positions of identification elements in the sub-area of the genuine object relative to the reference point;
- iii) comparing measured information relating to the positions of identification elements in an object to be verified with the recorded information for the genuine object.

A person of ordinary skill in the art, seeking to improve Walker's method would find no hint or teaching to incorporate these features from reading Walker alone, since these features are not disclosed in Walker.

The person of ordinary skill in the art would not turn to Smith (US 7,035,428) because Smith is concerned with a very different technology. Walker relates to a system in which identification elements are embedded in an object and the presence or absence of these elements is detected in a method of authenticating the document. The authentication fibres 14 can be luminescent so they are readily visible under UV light.

In contrast, Smith does not use identification elements that are embedded in an object. Instead, Smith uses visible, physical characteristics of the workpiece itself (e.g. a paper envelope) and a code is formulated based on the topographical appearance of a portion of the surface, seen from three different positions.

Hence, the person of ordinary skill in the art would not seek to combine these two teachings, as they relate to completely different technologies.

Furthermore, even if the person of ordinary skill in the art were to turn to Smith, he would still not modify Walker's method to include the three differentiating features (i), (ii) and (iii) noted above.

Firstly, he would not find it obvious to add feature (i): "identifying a sub-area of the genuine object defined by a reference point", because this is completely unnecessary in the context of Walker's system. In Walker's system, measuring relative to a reference point would be pointless, because all that is required is to match a first pattern of the fibres 14 with a second pattern of the indicia 16. Hence, it is completely irrelevant which portion of the media is selected, because the positions of the fibres 14 should always match the positions of the indicia 16, no matter which part of the object is selected. Since in Walker, the authentication elements 14 and authentication indicia 16 are distributed throughout the object, at respective locations which correspond only to each other, there is no possible benefit to Walker's system in adding a reference point, because it is irrelevant which part of the object is observed. Furthermore, the addition of a reference point defining a sub-area of the object would only create the further difficulties of having to properly align the object.

Hence, even reading Walker in conjunction with Smith would not lead the skilled person to incorporate feature (i) in Walker.

A similar line of reasoning applies to the second differentiating feature:

- ii) recording information relating to the positions of identification elements in the sub-area of the genuine object relative to the reference point.

In Walker, the positions of the authentication elements 14 relative to a reference point do not need to be recorded, because it is only relevant that the positions of the authentication elements 14 should match the positions of the authentication indicia 16.

Hence, even reading Walker in conjunction with Smith would not lead the skilled person to incorporate feature (ii) in Walker.

Turning now to the third differentiating feature:

- iii) comparing measured information relating to the positions of identification elements in an object to be verified with the recorded information for the genuine object.

The person of ordinary skill in the art, even on reading Smith, would still not seek to modify Walker's method by adding this third differentiating feature because, like Walker, Smith does not disclose feature (iii).

Column 4, lines 23 to 39 of Smith describes that "determination of validity of the workpiece is based upon random, intrinsic physical characteristics of the workpiece, thereby reducing or eliminating the need to perform database queries of identifying information to make such determinations... the technique of present invention permits off-line workpiece and indicia verification...."

How this is achieved is clarified on column 10, line 61 to column 11, line 27. To summarise, three images of the fiducial square 9 are taken and used to generate a hash value based on the appearance of the physical characteristics of the fiducial square 9.

The marks 8 on the workpiece are read and a hash value corresponding to these marks is generated. If the two hash values match within a predefined tolerance, the workpiece (e.g. piece of mail) is valid.

Hence, Smith's method compares two different sets of measured information. If the data obtainable from the marks 8 matches the data obtainable from three images of the fiducial square 9, the workpiece is valid.

However, Smith does not compare measured information with recorded information for a genuine object. There is no reference to any recorded information relating to the genuine object, and indeed it is one of Smith's stated advantages that the need to perform database queries can be eliminated.

Therefore, on reading this direct teaching against comparing measured information with information stored in a database relating to genuine objects, the person of ordinary skill in the art would not seek to modify Walker to introduce this feature (feature (iii)). Also, since neither Walker nor Smith discloses feature (iii), even combining these two documents could not lead the person of ordinary skill in the art to the present invention.

Non-obviousness: summary

Based on the foregoing, even if one were to read Walker in conjunction with Smith it would not lead the skilled person to incorporate any of the features (i) (ii) or (iii) into Walker. Hence, claim 16 is non-obvious over Walker, even when read in combination with Smith.

Similar reasoning applies to claim 31, which has features corresponding to the above three differentiating method features. Hence, claim 31 is also non-obvious over a combination of Walker and Smith.

Claim Rejections - 35 USC 103

Claims 18-19 were rejected under 35 USC 103(a) as being unpatentable over Walker (US 6,979,827) in view of Smith (US 7,035,428). However, claims 18 and 19 are dependent on claim 16, which is novel and non-obvious, as explained above. Accordingly, claims 18 and 19 are also novel and non-obvious, at least by virtue of this dependency.

The other dependent claims

Claims 17 and 20 to 30 are all dependent on claim 16 and claims 32 to 36 are all dependent on claim 31. Hence, these claims are also novel and non-obvious, at least by virtue of their dependencies.

Request for Allowance

It is thus believed that the application is now allowable and notification to this effect is earnestly solicited. Should the Examiner have any questions or comments regarding Applicants' amendments or response, he is asked to contact Applicants' undersigned representative at (215) 988.3303. Please direct all correspondence to the below-listed address.

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If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0573.

Respectfully submitted,



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